

GYM WORK-OUT EQUIPMENT FOR THE TRAINING OF THE CHEST,  
DELTOIDS, TRAPEZIUMS AND TRICEPS MUSCLES.

**TECHNICAL FIELD**

- 5 The object of the present invention is used for training in the field of body building of chest, deltoids, trapeziums and triceps muscles.

**BACKGROUND ART**

- At present many different machines exist which allow us to train the chest,  
10 deltoids, trapeziums and triceps muscles, but none of these have a system which actually passes the equipment (dumb-bells etc) allowing the athlete to prepare himself for the exercise without any initial force.

The equipment that already exist on the market consist in a bench with a moveable back rest with fixed brackets to hold the weights.

- 15 Alternatively, there is equipment where the bench is used with levers, which in different ways are connected to the required weights for the exercise.

In no such machine on the market exists a system which actually passes the equipment to the athlete who is already seated on the bench.

- 20 In fact before starting an exercise, an athlete must (already seated) lift the weights and at the end of the exercise, still in the same position must lower them.

## Substitute Specification

One of the many pieces of equipment already on the market represented by the patent claim EP-1-029-562-A1 actually presents the disadvantages as mentioned above.

### **DISCLOSURE OF INVENTION**

- 5 This new piece of equipment puts an end to difficulties and disadvantages which are present in the equipment that is presently on the market. It particularly reduces the efforts that an athlete puts into the sport both before and after the exercises, reducing time, effort and therefore the dangers of muscle strain.
- 10 In fact during the exercises with the help of the dumb-bells and bars done on a horizontal, vertical or inclined bench, the athlete must face the problem of getting and putting the weights back. As the weights get heavier, the physical and mental tiredness must also be considered, therefore there are many injuries connected to the lumbar and to
- 15 articulation of the arms and neck. Therefore it has been thought to add a help which will allow the athlete to use the weights in complete safety remembering that he can control the actions of the machine by using his feet.

The main characteristic of this piece of equipment is represented by the

20 fact that it consists in a bench that allows you to do exercises with the back rest of the bench in a horizontal position for stretching and pectoral exercises, upright bench for stretching above the head for deltoids and stretching with dumb-bells for triceps, - equipped with an assist mobile

### Substitute Specification

system of arms (servomechanisms) used to hold the weights (bars and dumb-bells) that with a mechanicals, hydraulics, electrics or pneumatics commands activables through rods, pedals, switchs or push buttons, allows the athlete to pick up and use the weights without changing position of the  
5 exercise, a way of limiting efforts which often at the end of an exercise when an athlete is tired can cause inflammation and personal injury, not to mention psychological stress due to muscle strain.

Another characteristic is that the devices that activate the commands positioned on a footrest can move the servomechanisms, both with a  
10 pneumatic system or with a mechanical system of levers and pulleys or any other electromechanical or electrohydraulic system.

Another characteristic is that the adaptable foot rest is of dimensions such to guarantee the support and the lodging of the devices that activate the commands and to assure the support of the feet during the development of  
15 the exercise.

Another characteristics are those of the side panels, places to protection of mechanism, which guarantee the safety of the athlete and that of passers-by, who could unintentionally come into contact with parts of machine in movement.

20 Other characteristic are those of the side panels, places to protection of mechanism, can be used as support for advertising material.

Another characteristic is the possibility to apply an electronic switchboard to the commands of servomechanisms, that are able to memorize the

## Substitute Specification

different positions chosen by the athlete according to the type of exercises to be done.

By pressing one of maneuver devices, the athlete (user) commands the servomechanism to position themselves at chest height. Now the athlete can  
5 grasp the weights and by activating the release device the arms return to their original position so as not to interfere during the exercise.

Let's now describe the main advantages of the invention.

1. Guarantees more comfort during work – outs in so much as the athlete doesn't have to perform unnatural movements such as  
10 positioning the equipment (weights) both before and after the exercise.
2. Improves the physical safety of the athlete, because it means that the weights must be moved once only at the beginning of a series of exercises, decreasing the chances of injuries.
- 15 3. Improves the physical safety of an athlete, in such a way as having to raise and lower the dumb-bells from the floor both at the beginning and at the end of an exercise, often in a horizontal positional position means that the muscles are stretched in an unnatural way often causing inflammation or swelling.
- 20 4. Allows you to enjoy the equipment. In fact with the proposed system, there is no need for a second person to help the athlete raise and lower the weights.

## Substitute Specification

5. Avoids blood pressure problems, often caused by excessive efforts, above all in the final part of the exercise.
6. Avoids wasting physical energy, which can be used for the following exercises.
- 5 7. Allows easy movement of the telescopic arms through foot commands which allow the athlete to stay in the same position for the whole exercise.

Another very important point to remember is the possibility to position any type of dumb-bell or weight onto the telescopic arms thanks to the universal brackets which hold the weights.

The advantages previously described can be seen clearly in the pictures included.

### **BRIEF DESCRIPTION OF DRAWINGS**

15 Figure 1, represents a general vision of invention characterized by the structure (A), the moveable bench (H), the footrest (B) where there are the devices of commands (C) and which hold the feet during the exercises, the safety panels (I) and all the other safety elements.

Figure 2, shows an enlargement of the footrest (B) on which the device of commands which move the mobile arms are positioned.

20 In figure 3, we can see the air tank position which is needed to activate the mobile arms.

In figures 1 & 4 the mobile arms are represented.

## Substitute Specification

In figures 1, 4 & 5 the brackets which hold the weights (F) are represented.

In figure 4 the hooks (G) to hold the weights are represented.

This equipment can be modified without modifying the patent.

5 This invention has numerous advantages which other equipment already on the market don't have.